

Amendments to the Abstract:

Please amend the abstract as follows:

The present invention provides a A detector for detecting~~detects~~ at least one kind of dependence in address between instructions executed by at least a processor, the detector being adopted to detect a possibility of presence of the at least one kind of dependence, wherein if the at least one kind of dependence is present in fact, then the detector detects a possibility of presence of the at least one kind of dependence, and if the at least one kind of dependence is not present in fact, then the detector is allowed to may detect a pseudo presence of the at least one kind of dependence. The detector has an execution history storing unit with a plurality of entries and an address converter for converting an address of a memory access instruction into an entry number, where different addresses may be converted into entry numbers that are the same.